WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
WASHINGTON

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE,
and
DEPARTMENT of CONSERVATION STATE of WASHINGTON

Data included in this report were obtained by the agencies named above in cooperation with the U.S. Forest Service, U.S. Geological Survey, National Park Service, and other Federal, State and private organizations.

AS OF
MAR. 1, 1966

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Listed below are water supply outlook reports based on Federal-State-Private Cooperative snow surveys. Those published by the Soil Conservation Service may be obtained from Soil Conservation Service, Room 507, Federal Building, 701 N. W. Glisan, Portland, Oregon 97209.

PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	LOCATION	COOPERATING WITH
RIVER BASINS			
WESTERN UNITED STATES	MONTHLY (FEB.-MAY)	PORTLAND, OREGON	ALL COOPERATORS
BASIC DATA SUMMARY	OCTOBER 1	PORTLAND, OREGON	ALL COOPERATORS
STATES			
ALASKA	MONTHLY (MAR.-MAY)	PALMER, ALASKA	ALASKA S.C.D.
ARIZONA	SEMI-MONTHLY (JAN.15 - APR.1)	PHOENIX, ARIZONA	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO	MONTHLY (FEB.-MAY)	FORT COLLINS, COLORADO	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MONTHLY (JAN.-JUNE)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
MONTANA	MONTHLY (JAN.-JUNE)	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NEVADA	MONTHLY (JAN.-MAY)	RENO, NEVADA	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
OREGON	MONTHLY (JAN.-JUNE)	PORTLAND, OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	MONTHLY (JAN.-JUNE)	SALT LAKE CITY, UTAH	UTAH STATE ENGINEER
WASHINGTON	MONTHLY (FEB.-JUNE)	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEB.-JUNE)	CASPER, WYOMING	WYOMING STATE ENGINEER

PUBLISHED BY OTHER AGENCIES

REPORTS	ISSUED	AGENCY
BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	WATER RESOURCES SERVICE, DEPT. OF LANDS, FOREST AND WATER RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

USDA-SCS PORTLAND, OREG. 1965

FEDERAL-STATE-COOPERATIVE
SNOW SURVEY AND WATER SUPPLY FORECASTS

For

WASHINGTON

Report Prepared
By

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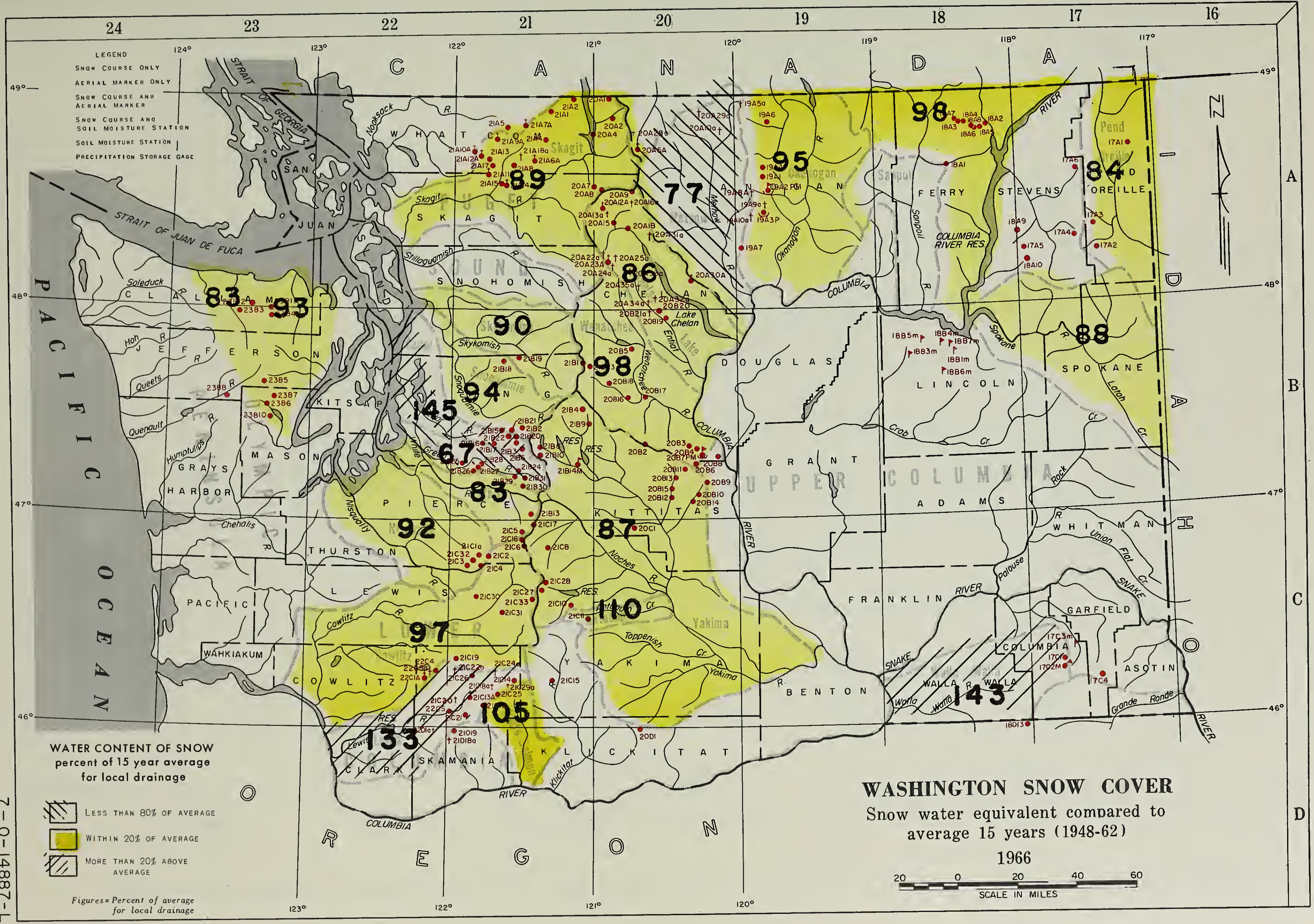
Spokane, Washington

Issued By

Orlo W. Krauter
State Conservationist
Soil Conservation Service
U. S. Department of Agriculture

Murray G. Walker, Supervisor
Division of Water Resources
Department of Conservation
State of Washington



WASHINGTON SNOW COVER

Snow water equivalent compared to average 15 years (1948-62)

1966

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE USDA-SCS PORTLAND OREG 1966 M-930

7-0-14887-L

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UPPER COLUMBIA DRAINAGE

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Pend Oreille River					
Boyer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1	24	32N	44E	5000
Winchester Creek	17A3	30	33N	43E	3970
Kettle River					
Boulder Road	18A2	36	39N	36E	1450
Butte Creek	18A3	28	39N	35E	4070
Cabin Creek	18A8	5	38N	36E	3170
Coat Creek	18A4	26	39N	35E	3595
Snow Caps Creek	18A5	3	38N	36E	2150
Snow Caps Trail	18A6	5	38N	36E	2720
Summit G. S.	18A7	20	39N	35E	4600
Colville River					
Baird	17A6	19	36N	42E	3215
Carlson	18A9	34	32N	38E	2885
Chewelah	17A4	11	32N	41E	4925
Stranger Mountain	17A5	26	31N	38E	4990
Togo	18A10	6	29N	38E	3370
Sonpoil River					
Sherman Creek Pass	18A1	19	36N	35E	5350
Okanogon River					
Clark	19A8a	2	36N	23E	7000
Muckamuck	19A9a	20	36N	24E	6750
Mutton Creek No. 1	19A1	30	37N	24E	5700
Mutton Creek No. 2	19A4	19	37N	24E	6000
Paysayten	20A28a	32	40N	18E	4300
Rusty Creek	19A3P	18	35N	24E	4000
Salmon Meadows	19A2PM	33	37N	24E	4500
Starvation Mtn.	19A10a	15	35N	23E	6750
Touts Coulee	19A6	30	39N	25E	2845
Methow River					
Billy Goat Pass	20A10a	10	38N	20E	6400
Dollar Watch	20A29a	8	39N	20E	7000
Harts Pass	20A5A	7	37N	18E	6500
Horseshoe Basin	19A5a	15	40N	23E	7000
Loup Loup	19A7	36	34N	23E	4650
Chelan Lake Basin					
Bridge Creek	20A15	20	34N	16E	2100
Bullion	20A18	2	33N	16E	1460
Cloudy Pass	20A22a	12	31N	15E	6500
Greenwood Flat	20A25a	3	31N	16E	3540
Little Meadows	20A24a	8	31N	16E	5275
Lyman Lake	20A23A	18	31N	16E	5900
Park Creek Flat	20A13a	18	34N	16E	2220
Park Creek Ridge	20A12A	7	34N	16E	4600
Petersons	20A16a	3	34N	17E	3730
Rainy Pass	20A9	21	35N	17E	4780
Safety Harbor	20A30A	32	31N	20E	6300
War Creek Pass	20A31a	34	33N	18E	6500
Entiat River					
Brief	20B19	34	28N	19E	1600
Entiat Meadows	20A33a	28	31N	17E	4800
Entiat River Trail	20A34a	2	29N	17E	3150
Pope Ridge	20B20	22	29N	18E	4300
Pugh Ridge	20A32a	34	30N	18E	6400
Snow Brushy	20A35a	21	30N	17E	3850
Tommy Creek	20B21a	10	28N	18E	5300
Wenatchee River					
Berne-Mill Creek	21B23	7	26N	15E	2925
Blewett Pass No. 2	20B2	35	22N	17E	4270
Chiwaukum G. S.	20B16	4	25N	17E	1810
Lake Wenatchee	20B5	33	27N	17E	1970
Leavenworth R. S.	20B17	1	24N	17E	1127
Merritt	20B18	4	26N	16E	2140
Stevens Pass	21B1	14	26N	13E	4070
Squilchuck Creek					
Beehive Springs	20B3	12	21N	19E	4400
Scout-A-Vista	20B4	18	21N	20E	3400
Stemilt Creek					
Jump-Off	20B8	34	21N	20E	4450
Stemilt Slide	20B6	30	21N	20E	5000
Upper Wheeler	20B7PM	30	21N	20E	4400
Crob Creek					
Creston-Kunz	18B1m	32	27N	34E	2440
Jack Woods	18B3m	28	27N	31E	2750
Krause	18B4m	21	27N	33E	2420
Sheffels	18B5m	17	27N	32E	2378
Sherman	18B7m	24	27N	33E	2440
Wheatridge	18B6m	24	25N	32E	2290
Yakima River					
Ahtanum R. S.	21C11	26	12N	14E	3100
Big Boulder Creek	21B9	35	23N	14E	3200
Bumping Lake	21C8	23	16N	12E	3450
Clockum Pass	20B9	25	20N	20E	5370
Cooke Creek	20B10	17	19N	20E	4123
Fish Lake	21B4	34	24N	14E	3371
Green Lake	21C10	3	12N	13E	6000
Grouse Camp	20B11	29	21N	19E	5385
High Creek	20B12	34	20N	19E	2930
Lake Cle Elum	21B14M	15	20N	14E	2200
Manashtash	20C1	24	17N	16E	3935
Morse Lake	21C17	6	16N	11E	5400
Nanum	20B13	4	20N	19E	3875
Trail Creek	20B14	20	19N	20E	3360
Tunnel Avenue	21B8	13	21N	11E	2450
Walters Flat	20B15	22	20N	19E	3360
White Pass (East Side)	21C28	2	13N	11E	4500
White Pass (Leach Lake)	21C27	1	13N	11E	4500

LOWER COLUMBIA DRAINAGE

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Asotin Creek					
Spruce Springs	17C4	9	8N	42E	5700
Mill Creek					
Couse	17C3m	2	9N	35E	3370
Homestead	17C1	11	9N	40E	4030
Martin Springs (Helmers SM)	17C2M	23	9N	40E	4400
Walla Walla Diversion	18D13	22	6N	38E	2400
Klickitat River					
Satus Pass	20D1	21	6N	17E	4030
West Fork Cabin	21C15	23	9N	12E	3000
White Salmon River					
Cultus Creek	21C12	35	7N	8E	4000
Lewis River					
Blue Lake	21C22a	19	9N	8E	4800
Bob's Trail	21C21	25	8N	7E	2200
Calamity Ridge	22D1a	8	5N	5E	2500
Council Pass	21C18a	24	9N	9E	4200
Divide Meadow	21C29a	21	9N	10E	5600
Grand Meadow	21C25	28	8N	9E	3500
Lone Pine Shelter	21C26	8	9N	7E	3800
Marble Mountain	22C5a	24	8N	5E	3200
New Muddy River	22C6	36	8N	6E	2000
Oldman Pass	21D19	22	6N	7E	3100
Lewis River (continued)					
Plains of Abraham	22C1a	35	9N	5E	4400
Smith Creek Road	22C4	29	9N	6E	2100
Spencer Meadow	21C20a	16	8N	7E	3400
Surprise Lakes	21C13A	14	7N	8E	4250
Table Mountain	21C24a	20	9N	9E	4200
Timbered Peak	21D18a	36	6N	6E	3000
Cowlitz River					
Cayuse Pass	21C6	15	16N	10E	5300
Mosquito Meadows	21C19	33	10N	7E	4100
Ohanapecosh	21C32	28	15N	10E	2200
Packwood Lake	21C31	21	13N	10E	2870
Pigtail Peak	21C33	11	13N	11E	5900
Potato Hill	21C14	36	10N	10E	4500
Willame Creek	21C30	3	13N	8E	3250

PUGET SOUND DRAINAGE

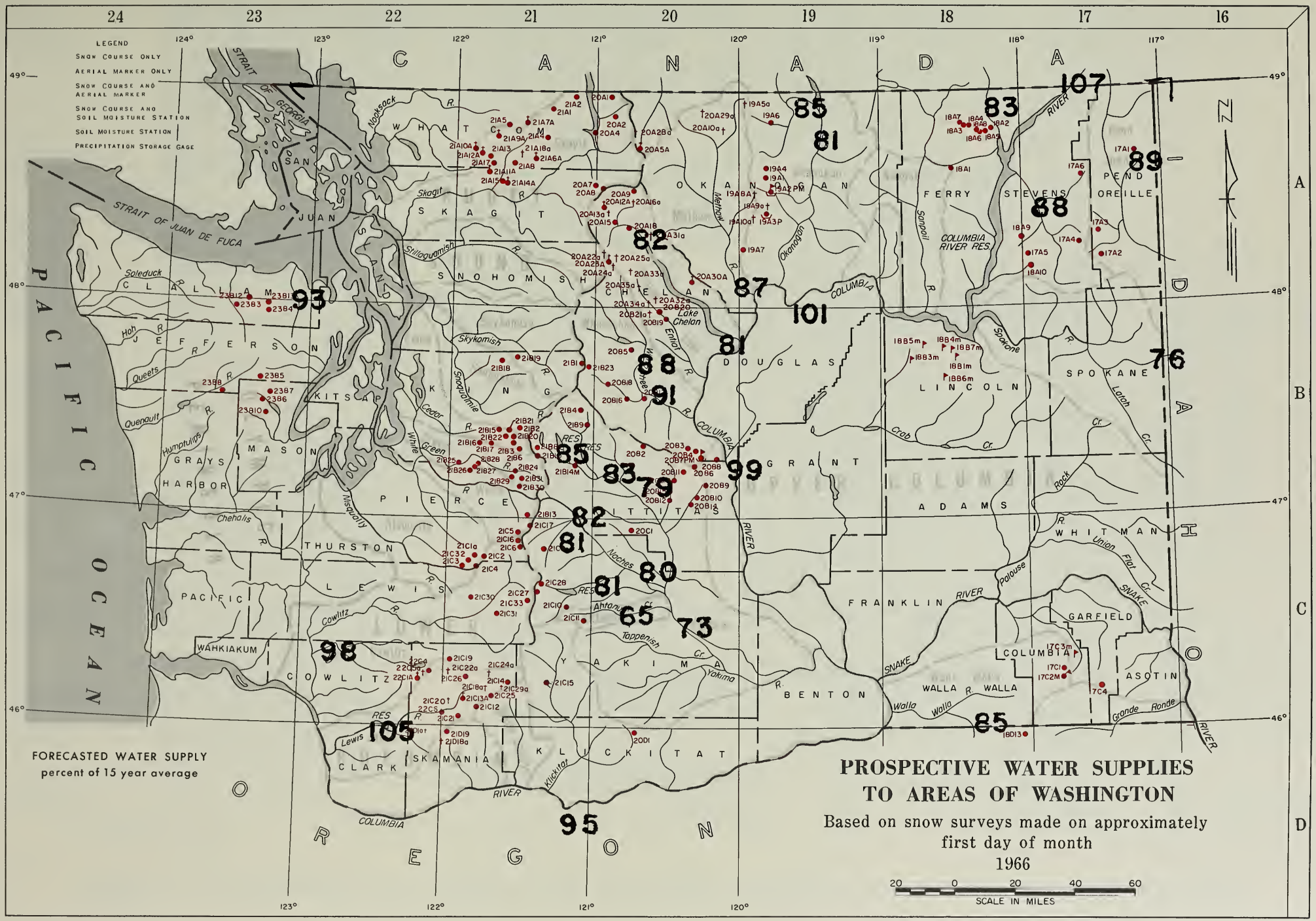
NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Nisquolly River					
Ghost Forest	21C4	23	15N	8E	4550
Longmire	21C3	29	15N	8E	2760
Paradise Park	21C2	13	15N	8E	5500
Stem Glade	21C1	13	15N	8E	5050
White River					
Corral Pass	21B13	30	18N	11E	6000
White River Entrance	21C5	4	16N	10E	3600
White River Entrance (new)	21C16	4	16N	10E	3400
Green River					
Airstrip	21B24	18	20N	11E	1800
Charley Creek	21B25	27	21N	8E	1200
Grass Mountain No. 1	21B26	21	20N	8E	4000
Grass Mountain No. 2	21B27	14	20N	8E	2900
Grass Mountain No. 3	21B28	12	20N	8E	2100
Lester Creek	21B29	36	20N	10E	3100
Sawmill Ridge	21B31	5	19N	11E	4700
Stampede Pass	21B10	25	21N	11E	3000
Twin Camp	21B30	18	19N	11E	4100
Cedar River					
City Cabin	21B3	10	21N	10E	2390
Mt. Gardner	21B21	30	22N	10E	3300
Mt. Gardner Aux.	21B22	31	22N	10E	2500
Mt. Lindsay	21B16	31	22N	9E	2500
Mt. Washington	21B15	8	22N	9E	3000
Rex River	21B17	11	21N	9E	2400
South Fork Cedar	21B6	24	21N	10E	3000
Tinkham Creek	21B20	1	21N	10E	3400
Snoqualmie River					
Olallie Meadows	21B2	19	22N	11E	3625
South Fork Tolt	21B18	26	26N	9E	1900
Skykomish River					
Lake Elizabeth	21B19	33	26N	10E	2900
Skagit River					
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Devils Park	20A4	34	38N	16E	5900
Skagit River (continued)					
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeout Meadows	20A2	8	40N	16E	5000
Lake Hozomeen	21A2	19	40N	14E	2600
Meadows Cabins	20A8	29	36N	14E	1900
Thunder Basin	20A7	15	35N	14E	4200
Boker River					
Dock Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Pass	21A6A	17	38N	11E	5400
Marten Lake	21A9A	23	38N	8E	3600
Mount Blum	21A18a	27	38N	10E	5800
Rocky Creek	21A12A	20	37N	8E	2100
Schreibers Meadow	21A10A	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8	25	37N	9E	4500
Nooksack River					
Panorama	21A5	17	39N	9E	4300

OLYMPIC PENINSULA

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Dungeness River					
Deer Park	23B4	1	28N	5W	5200
Morse Creek					
Deer Park G. S.	23B13	1	28N	5W	4850
Morse Creek	23B12	25	29N	7W	5425
Elwha River					
Hurricane	23B3	36	29N	7W	4500
Skokomish River					
Black and White	23B7	17	24N	5W	4200
Black and White Lakes	23B6	16	24N	5W	4700
Four Stream	23B10	1	23N	6W	3000
Home Sweet Home	23B5	28	25N	5W	5200
Sundown Pass	23B8	25	24N	7W	3900

LEGEND
NUMBERING SYSTEM EXAMPLE

21A7 SNOW COURSE ONLY
21A7a AERIAL MARKER ONLY
21A7A SNOW COURSE AND AERIAL MARKER
21A7M SNOW COURSE AND SOIL MOISTURE STATION
21A7m SOIL MOISTURE STATION
21A7P SNOW COURSE AND PRECIPITATION STORAGE GAGE
21A7p PRECIPITATION STORAGE GAGE



U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE — USDA SCS PORTLAND, OREG. 1966 M-929

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UPPER COLUMBIA DRAINAGE

Pend Oreille River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Boyer Mountain	17A2	[illegible]	31N	43E	525[illegible]
Bunchgrass Meadow	17A1	24	37N	44E	5000
Winchester Creek	17A3	30	33N	43E	2970

Kettle River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Boulder Road	18A2	36	39N	36E	1450
Butte Creek	18A3	28	34N	35E	4070
Cabin Creek	18A[illegible]	5	38N	36E	3170
Goat Creek	18A[illegible]	26	39N	35E	3535
Snow Caps Creek	18A5	3	38N	36E	2150
Snow Caps Trail	18A6	5	38N	36E	2720
Summit G. S.	18A7	20	39N	35E	4600

Colville River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Baird	17A8	19	36N	42E	3215
Carlson	18A9	34	32N	38E	2885
Chewelah	17A4	11	32N	41E	4925
Stranger Mountain	17A5	26	31N	38E	4990
Togo	18A10	6	29N	38E	3370

Sanpoil River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Sherman Creek Pass	18A1	19	36N	35E	5350

Okanogan River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Clark	19A8a	2	36N	23E	7000
Muckamuck	19A9a	20	36N	24E	6750
Mutton Creek No. 1	19A1	30	37N	24E	5700
Mutton Creek No. 2	19A4	19	37N	24E	6000
Paysayten	20A28a	32	40N	18E	4300
Rusty Creek	19A3P	18	35N	24E	4000
Salmon Meadows	19A2PM	33	37N	24E	4500
Starvation Mtn.	19A10a	15	35N	23E	6750
Touts Coulee	19A6	30	39N	25E	2845

Methow River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Billy Goat Pass	20A10a	10	38N	20E	6400
Dollar Watch	20A29a	8	39N	20E	7000
Harts Pass	20A5A	7	37N	18E	6500
Horseshoe Basin	19A5a	15	40N	23E	7000
Loup Loup	19A7	36	34N	23E	4650

Chelan Lake Basin

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Bridge Creek	20A15	20	34N	16E	2100
Bullion	20A18	2	33N	16E	1460
Cloudy Pass-	20A22a	12	31N	15E	6500
Greenwood Flat	20A25a	3	31N	16E	3540
Little Meadows	20A24a	8	31N	16E	5275
Lyman Lake	20A23A	18	31N	16E	5900
Park Creek Flat	20A13a	18	34N	16E	2220
Park Creek Ridge	20A12A	7	34N	16E	4600
Petersons	20A16a	3	34N	17E	3730
Rainy Pass	20A9	21	35N	17E	4780
Safety Harbor	20A30A	32	31N	20E	6300
War Creek Pass	20A31a	34	33N	18E	6500

Entiat River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Brief	20B19	34	28N	19E	1600
Entiat Meadows	20A33a	28	31N	17E	4800
Entiat River Trail	20A34a	2	29N	17E	3150
Pope Ridge	20B20	22	29N	18E	4300
Pugh Ridge	20A32a	34	30N	18E	6400
Snow Brushy	20A35a	21	30N	17E	3850
Tommy Creek	20B21a	10	28N	18E	5300

Wenatchee River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Berne-Mill Creek	21B23	7	26N	15E	2925
Blewett Pass No. 2	20B2	35	22N	17E	4270
Chiwaukum G. S.	20B16	4	25N	17E	1810
Lake Wenatchee	20B5	33	27N	17E	1970
Leavenworth R. S.	20B17	1	24N	17E	1127
Merritt	20B18	4	26N	16E	2140
Stevens Pass	21B1	14	26N	13E	4070

Squilchuck Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Beehive Springs	20B3	12	21N	19E	4400
Scout-A-Vista	20B4	18	21N	20E	3400

Stemilt Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Jump-Off	20B8	34	21N	20E	4450
Stemilt Slide	20B6	30	21N	20E	5000
Upper Wheeler	20B7FM	30	21N	20E	4400

Crab Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Creston-Kuns	18B1m	32	27N	34E	2440
Jack Woods	18B3m	28	27N	31E	2750
Krause	18B4m	21	27N	33E	2420
Sheffels	18B5m	17	27N	32E	2378
Sherman	18B7m	24	27N	33E	2440
Wheatridge	18B6m	24	25N	32E	2290

Yakima River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Ahtanum R. S.	21C11	26	12N	14E	3100
Big Boulder Creek	21B9	35	23N	14E	3200
Bumping Lake	21C8	23	16N	12E	3450
Clockum Pass	20B9	25	20N	20E	5370
Cooke Creek	20B10	17	19N	20E	4123
Fish Lake	21B4	34	24N	14E	3371
Green Lake	21C10	3	12N	13E	6000
Grouse Camp	20B11	29	21N	19E	5385
High Creek	20B12	34	20N	19E	2930
Lake Cle Elum	21B14M	15	20N	14E	2200
Manashtash	20C1	24	17N	16E	3935
Morse Lake	21C17	6	16N	11E	5400
Nanum	20B13	4	20N	19E	3875
Trail Creek	20B14	20	19N	20E	3360
Tunnel Avenue	21B8	13	21N	11E	2450
Walters Flat	20B15	22	20N	19E	3360
White Pass (East Side)	21C28	2	13N	11E	4500
White Pass (Leach Lake)	21C27	1	13N	11E	4500

LOWER COLUMBIA DRAINAGE

Asotin Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Spruce Springs	17C4	9	8N	42E	5700

Mill Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Couse	17C3m	2	9N	35E	3370
Homestead	17C1	11	9N	40E	4030
Martin Springs (Helmers SM)	17C2M	23	9N	40E	4400
Walla Walla Diversion	18D13	22	6N	38E	2400

Klickitat River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Satus Pass	20D1	21	6N	17E	4030
West Fork Cabin	21C15	23	9N	12E	3000

White Salmon River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Cultus Creek	21C12	35	7N	8E	4000

Lewis River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Blue Lake	21C22a	19	9N	8E	4800
Bob's Trail	21C21	25	8N	7E	2200
Calamity Ridge	22D1a	8	5N	5E	2500
Council Pass	21C18a	24	9N	9E	4200
Divide Meadow	21C29a	21	9N	10E	5600
Grand Meadow	21C25	28	8N	9E	3500
Lone Pine Shelter	21C26	8	9N	7E	3800
Marble Mountain	22C5a	24	8N	5E	3200
New Muddy River	22C6	36	8N	6E	2000
Oldman Pass	21D19	22	6N	7E	3100

Lewis River (continued)

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Plains of Abraham	22C1a	35	9N	5E	4400
Smith Creek Road	22C4	29	9N	6E	2100
Spencer Meadow	21C20a	16	8N	7E	3400
Surprise Lakes	21C13A	14	7N	8E	4250
Table Mountain	21C24a	20	9N	9E	4200
Timbered Peak	21D18a	36	6N	6E	3000

Cowlitz River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Cayuse Pass	21C6	15	16N	10E	5300
Mosquito Meadows	21C19	33	10N	7E	4100
Ohanapecosh	21C32	28	15N	10E	2200
Packwood Lake	21C31	21	13N	10E	2870
Pigtail Peak	21C33	11	13N	11E	5900
Potato Hill	21C14	36	10N	10E	4500
Willame Creek	21C30	3	13N	8E	3250

PUGET SOUND DRAINAGE

Nisqually River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Ghost Forest	21C4	23	15N	8E	4550
Longmire	21C3	29	15N	8E	2760
Paradise Park	21C2	13	15N	8E	5500
Stem Glade	21C1	13	15N	8E	5050

White River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Corral Pass	21B13	30	18N	11E	6000
White River Entrance	21C5	4	16N	10E	3600
White River Entrance (new)	21C16	4	16N	10E	3400

Green River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Airstrip	21B24	18	20N	11E	1800
Charley Creek	21B25	27	21N	8E	1200
Grass Mountain No. 1	21B26	21	20N	8E	4000
Grass Mountain No. 2	21B27	14	20N	8E	2900
Grass Mountain No. 3	21B28	12	20N	8E	2100
Lester Creek	21B29	36	20N	10E	3100
Sawmill Ridge	21B31	5	19N	11E	4700
Stampede Pass	21B10	25	21N	11E	3000
Twin Camp	21B30	18	19N	11E	4100

Cedar River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
City Cabin	21B3	10	21N	10E	2390
Mt. Gardner	21B21	30	22N	10E	3300
Mt. Gardner Aux.	21B22	31	22N	10E	2500
Mt. Lindsay	21B16	31	22N	9E	2500
Mt. Washington	21B15	8	22N	9E	3000
Rex River	21B17	11	21N	9E	2400
South Fork Cedar	21B6	24	21N	10E	3000
Tinkham Creek	21B20	1	21N	10E	3400

Snoqualmie River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Olallie Meadows	21B2	19	22N	11E	3625
South Fork Tolt	21B18	26	26N	9E	1900

Skykomish River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Lake Elizabeth	21B19	33	26N	10E	2900

Skagit River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Beaver Creek Trail	21A4	35	39N	12E	2200
Beaver Pass	21A1	9	39N	12E	3680
Devils Park	20A4	34	38N	16E	5900

Skagit River (continued)

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Freezeout Creek Trail	20A1	14	40N	14E	3500
Freezeout Meadows	20A2	8	40N	16E	5000
Lake Hozomeen	21A2	19	40N	14E	2600
Meadows Cabins	20A8	29	36N	14E	1900
Thunder Basin	20A7	15	35N	14E	4200

Baker River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Dock Butte	21A11A	8	36N	8E	3800
Easy Pass	21A7A	19	39N	11E	5200
Jasper Pass	21A6A	17	38N	11E	5400
Marten Lake	21A9A	23	38N	8E	3600
Mount Blum	21A18a	27	38N	10E	5800
Rocky Creek	21A12A	20	37N	8E	2100
Schreibers Meadow	21A10A	18	37N	8E	3400
S. F. Thunder Creek	21A14A	20	36N	9E	2200
Sulphur Creek	21A13	22	37N	8E	1600
Three Mile Creek	21A15	18	36N	9E	1600
Watson Lakes	21A8	25	37N	9E	4500

Nooksack River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Panorama	21A5	17	39N	9E	4300

OLYMPIC PENINSULA

Dungeness River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Deer Park	23B4	1	28N	5W	5200

Morse Creek

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Deer Park G. S.	23B13	1	28N	5W	4850
Morse Creek	23B12	25	29N	7W	5425

Elwha River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Hurricane	23B3	36	29N	7W	4500

Skokomish River

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
Black and White	23B7	17	24N	5W	4200
Black and White Lakes	23B6	16	24N	5W	4700
Four Stream	23B10	1	23N	6W	3000
Home Sweet Home	23B5	28	25N	5W	5200
Sundown Pass	23B8	25	24N	7W	3900

LEGEND
NUMBERING SYSTEM EXAMPLE

21A7 SNOW COURSE ONLY
21A7a AERIAL MARKER ONLY
21A7A SNOW COURSE AND AERIAL MARKER
21A7M SNOW COURSE AND SOIL MOISTURE STATION
21A7m SOIL MOISTURE STATION
21A7P SNOW COURSE AND PRECIPITATION STORAGE GAGE
21A7p PRECIPITATION STORAGE GAGE

WATER SUPPLY OUTLOOK

State of Washington
March 1, 1966

* *
* The water supply outlook for irrigation and power in the Columbia *
* Basin portion of Washington and tributary streams should be ade- *
* quate in most cases. Snowfall during February was below normal *
* occuring mostly during the latter part of the month. Although *
* temperature was above normal very little of the snow melted during *
* February and runoff was all well below normal. Some streams were *
* reported to have record lows. The snowpack over Washington var- *
* ied from a high of 145% to a low of 67%. This snowpack varies *
* greatly with elevation, the better percentages at the lower eleva- *
* tions. Soil mantles continue to have less water than was reported *
* last year and only about 50% of capacities. Reservoirs have well *
* below average amounts of water in storage but inflow should be *
* sufficient for most uses. The total outlook is not as good as was *
* reported last month. *
* *

SNOW COVER

Except for a few individual watersheds most of the snow cover in Washington is below average. Comparisons of snow conditions in British Columbia from tributary streams shows a pack that is much better. Above normals are found on many of these snow courses. Along the Cascades the snow cover is good at lower elevations and poor at the higher snow courses. Where there is only limited amount of snow information from both high and low elevation this results in some biased snow cover comparisons. The Upper Columbia Basin snow cover varies from 10% above to 23% below normal. The Lower Columbia varies from 43% above to 3% below and the Puget area varies from 33% below to 45% above. The snow cover on the Olympic Peninsula is 88% of normal.

RESERVOIRS

All of the reservoirs reported from the Columbia Basin in Washington have below average amounts of water in storage. Conconully Reservoir has been drained for repairs but is expected to start filling in March. The other reservoirs have water in storage ranging from 26% of average to 94%. Reservoirs on the Skagit River are in good shape having above normal amount of stored water. With the exception of Conconully and Salmon Lakes and possibly Rimrock Lake, all reservoirs are expected to fill with the spring runoff. Heavy early season use of stored water could change this picture.

PRECIPITATION

February precipitation over Washington varied from less than 50% of average to near normal in a few locations. Most of the State experienced the well below normal precipitation. Fall precipitation was 40% of normal and winter precipitation all below--68% to 88%--with the exception of the Columbia in Canada. Early winter precipitation in this area was above normal and the below normal precipitation of the last month was not enough to offset this favorable backlog.

SOIL MOISTURE

The eleven soil moisture stations that are used for reporting soil mantle wetness indicate present conditions to be below that which was experienced last year at this time. These soil moisture stations vary from 65% of last year to 7% above. When comparing these stations to a total capacity of the soil, the mantle is about 50% full The five stations in the Crab Creek drainage are 53% of capacity and 93% of last year. The one in the Upper Columbia area in British Columbia is 45% of capacity and 79% of last year. The two stations in the Yakima drainage are 72% of capacity and 99% of 1965. On the Walla Walla drainage in Washington the two stations are 67% of capacity and 68% of last year. The one new station in the lower Wenatchee watershed is 63% of capacity and 95% of last year.

STREAMFLOW

During the month of February record or near record low runoff occurred from all watersheds in Washington. Forecasts of streamflow for the rivers in Washington and tributary basins indicate seasonal streamflow is expected to be from 35% below normal to 7% above. The Columbia River at Birchbank is expected to flow 7% above normal during the April-September period. This deteriorates down to the Columbia River at The Dalles where it is expected to flow 5% below normal during the same period. The Pend Oreille River as measured below Box Canyon is forecasted to flow 89% of normal and the Okanogan at Tonasket 81%. On the Yakima River system the forecast varies from 4% below normal for the Kachess River near Easton to 35% below for Ahtanum Creeks near Tampico. Numerical forecasts for the April-September, April-July and April-June periods are found elsewhere in this report.

STREAMFLOW FORECASTS - MARCH 1966

The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts.

Basin, Stream and Station	Seasonal Streamflow in Thousands of Acre-Feet						
	Forecast Runoff 1966	% 15-Yr. Avg.	Fore-cast Period	Measured Runoff 1965	1964	1963	15-Yr. Average 1948-62
COLUMBIA BASIN							
Columbia River System							
Columbia River at Birchbank 1/	48100	107	Apr-Sep	43105	45907	41044	45029
	38150	107	Apr-Jul	32803	35860	31415	35518
	27000	108	Apr-Jun	23052	23138	21909	24985
Columbia River at Grand Coulee 1/	71000	101	Apr-Sep	69626	70512	57725	70253
	60600	103	Apr-Jul	56879	58420	46726	58921
	46700	103	Apr-Jun	44465	42575	35080	45486
Columbia River bl. Rock Island Dam 1/	76500	99	Apr-Sep	74987	77192	62458	77312
	64300	99	Apr-Jul	61760	64116	50902	64967
	50400	100	Apr-Jun	48046	46500	38455	50178
Columbia River at The Dalles, Ore. 1/	103500	95	Apr-Sep	112902	110401	86967	108696
	87500	95	Apr-Jul	95012	93375	71820	92527
	71000	96	Apr-Jun	76940	71485	56310	74282
Pend Oreille River System							
Pend Oreille River bl. Box Canyon	15000	89	Apr-Sep		17542	11762	16905
	13650	88	Apr-Jul		15990	10741	15571
	11600	87	Apr-Jun		13518	9144	13399
Kettle River System							
Kettle River nr. Laurier	1700	83	Apr-Sep	1881	2022	1394	2051
	1620	83	Apr-Jul	1782	1796	1333	1952
	1460	82	Apr-Jun	1678	1580	1193	1774

1/ Observed flow corrected for storage in any of the following reservoirs which are above the station: Kootenay Lake, Hungry Horse, Flathead Lake, Pend Oreille Lake, F. D. Roosevelt Lake, Lake Chelan, Coeur d'Alene Lake, Brownlee, Noxon Reservoir and pumpage at F. D. Roosevelt Lake.

Streamflow Forecasts - March 1966 (Cont)

Basin, Stream and Station	Forecast Runoff 1966	% 15-Yr. Avg.	Fore-cast Period	Seasonal Streamflow in Thousands of Acre-Feet: Measured Runoff 1965	1964	1963	15-Yr. Average 1948-62
Kettle River System (Cont)							
Colville River							
at Kettle Falls	165	88	Apr-Sep		92	113	187
	153	89	Apr-Jul		82	104	172
	141	89	Apr-Jun		77	97	159
Spokane River System *							
Spokane River							
at Post Falls, Ida. 2/	2600	76	Apr-Sep		3836	1832	3413
	2520	76	Apr-Jul		3675	1770	3316
	2400	76	Apr-Jun		3466	1692	3158
Okanogan River System **							
Similkameen River							
nr. Nighthawk	1415	85	Apr-Sep	1352	1872	1218	1665
	1325	85	Apr-Jul	1234	1715	1066	1550
	1160	87	Apr-Jun	1105	1340	850	1331
Okanogan River							
at Oroville 3/	370	75	Apr-Sep		373	237	495
	365	74	Apr-Jul		329	239	493
	360	76	Apr-Jun		299	207	472
Okanogan River							
nr. Tonasket	1580	81	Apr-Sep	1637	2058	1238	1957
	1450	82	Apr-Jul	1496	1823	1078	1771
	1240	83	Apr-Jun	1313	1420	854	1502
Methow River System **							
Methow River							
nr. Pateros	1030	87	Apr-Sep	859	949	882	1178
	960	88	Apr-Jul	781	884	806	1096
	820	87	Apr-Jun	671	729	687	940
Chelan River System							
Chelan River							
at Chelan 4/	1100	81	Apr-Sep		1293	936	1352
	990	82	Apr-Jul		1141	802	1202
	790	84	Apr-Jun		821	655	946

* Forecasts made by Morlan W. Nelson and J. Alden Wilson, Soil Conservation Service, Boise, Idaho.

** These forecasts are based in part upon base flow data especially prepared and furnished for the purpose by the U. S. Geological Survey.

2/ Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane Valley Farms Company and Rathdrum Prairie Canals.

3/ Observed flow corrected for storage and diversions.

4/ Observed flow corrected for storage in Lake Chelan.

Streamflow Forecasts - March 1966 (Cont)

Basin, Stream and Station	Forecast Runoff 1966	% 15-Yr. Avg.	Forecast Period	Seasonal Streamflow in Thousands of Acre-Feet: Measured Runoff 1965	1964	1963	15-Yr. Average 1948-62
Chelan River System (Cont)							
Stehekin River							
at Stehekin	770	82	Apr-Sep		949	698	943
	665	82	Apr-Jul		815	578	810
	515	83	Apr-Jun		578	459	617
Wenatchee River System							
Wenatchee River							
at Plain	1235	88	Apr-Sep		1469	860	1397
	1115	88	Apr-Jul		1295	770	1267
	920	91	Apr-Jun		924	653	1013
Wenatchee River							
at Peshastin	1750	91	Apr-Sep	1751	1951	1166	1924
	1610	92	Apr-Jul	1604	1735	1050	1758
	1330	94	Apr-Jun	1326	1252	895	1415
Stemilt Basin							
nr. Wenatchee	125*		May-Sep			138*	--
Yakima River System							
Yakima River							
nr. Martin 5/	134	85	Apr-Sep	132	203	75	158
	124	85	Apr-Jul	126	182	70	146
	110	87	Apr-Jun	115	138	64	126
Yakima River							
at Cle Elum 6/	830	79	Apr-Sep		1254	576	1046
	770	80	Apr-Jul		1127	516	962
	680	82	Apr-Jun		888	459	834
Yakima River							
nr. Parker 7/	1480	73	Apr-Sep		2005	921	2016
	1490	75	Apr-Jul		1917	942	1988
	1400	77	Apr-Jun		1606	929	1826
Kachess River							
nr. Easton 8/	136	96	Apr-Sep	116	176	61	141
	130	97	Apr-Jul	112	161	59	134
	118	100	Apr-Jun	104	128	56	118

* Thousands of Miners' Inches.

5/ Observed flow corrected for storage in Lake Keechelus.

6/ Observed flow corrected for storage in Keechelus, Kachess and Cle Elum Lakes and diversion by Kittitas Canal.

7/ Observed flow corrected for storage in Keechelus, Kachess, Cle Elum, Bumping and Rimrock Lakes and diversions by Roza, Union Gap, New Reservation, Old Reservation and Sunnyside Canals.

8/ Observed flow corrected for storage in Lake Kachess.

Streamflow Forecasts - March 1966 (Cont)

Basin, Stream and Station	Forecast Runoff 1966	% 15-Yr. Avg.	Forecast Period	Seasonal Streamflow in Thousands of Acre-Feet: Measured Runoff 1965	1964	1963	15-Yr. Average 1948-62
Yakima River System (Cont)							
Cle Elum River							
nr. Roslyn 9/	438	83	Apr-Sep	461	577	285	525
	405	84	Apr-Jul	429	520	264	483
	350	86	Apr-Jun	375	401	234	407
Bumping River							
nr. Nile 10/	132	81	Apr-Sep	141	167	85	163
	122	81	Apr-Jul	131	150	78	151
	105	85	Apr-Jun	116	109	70	124
American River							
nr. Nile	115	82	Apr-Sep		131	84	140
	107	82	Apr-Jul		120	77	130
	92	85	Apr-Jun		90	67	108
Tieton River							
at Tieton Dam 11/	228	81	Apr-Sep	230	235	171	280
	194	80	Apr-Jul	205	201	141	241
	158	82	Apr-Jun	173	146	121	193
Naches River							
nr. Naches 12/	790	80	Apr-Sep		914	586	991
	720	79	Apr-Jul		818	524	908
	630	81	Apr-Jun		642	466	776
Ahtanum Creeks							
nr. Tampico 13/	36	65	Apr-Sep		35	38	55
	32	63	Apr-Jul		31	35	51
	30	67	Apr-Jun		26	31	45
Lower Columbia River System							
Mill Creek							
nr. Walla Walla	29	85	Apr-Sep		34	20	34
	25	83	Apr-Jul		31	17	30
	22	81	Apr-Jun		28	15	27
Lewis River							
at Ariel 14/	1570	94	Mar-Jul		1201	1259	1663
	1520	105	Apr-Sep		1451	1119	1450
	1360	106	Apr-Jul		1233	1000	1286
	1200	105	Apr-Jun		1053	909	1140

9/ Observed flow corrected for storage in Lake Cle Elum.
10/ Observed flow corrected for storage in Bumping Lake.
11/ Observed flow corrected for storage in Rimrock Lake.
12/ Observed flow corrected for storage in Bumping and Rimrock Lakes and diversions by Tieton, Selah Valley, Wapatox Canals and City of Yakima.
13/ Observed flow of North and South Forks (combined).
14/ Observed flow corrected for storage in Lake Merwin, Yale and Swift Reservoirs.

Streamflow Forecasts - March 1966 (Cont.)

Basin, Stream and Station	Forecast Runoff 1966	Seasonal Streamflow in Thousands of Acre-Feet: % 15-Yr Avg.	Fore-cast Period	Measured Runoff 1965	1964	1963	15-Yr. Average 1948-62
Lower Columbia River System (Cont.)							
Cowlitz River							
at Castle Rock 15/	2900	98	Apr-Sep	3330	2221		2954
	2580	98	Apr-Jul	2884	1944		2620
	2180	97	Apr-Jun	2338	1711		2244
OLYMPIC PENINSULA							
Dungeness River System							
Dungeness River							
nr. Sequim	165	93	Apr-Sep	159	134		178
	137	93	Apr-Jul	132	106		147
	105	95	Apr-Jun	95	79		111

15/ Observed flow corrected for storage in Mayfield Reservoir

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Washington stream basins presents the water content of the snow about March 1, 1966 as per cent of the same date in 1965 and 1964 and average of record.

Tributary Basin	No. of Courses Average	Years of Record	1966 Snow Water Expressed as per cent of 1965	1964	1948-62
UPPER COLUMBIA BASIN					
Pend Oreille	5 - 9	2 - 30	82	95	84*
Kettle	3 - 12	3 - 26	74	95	98*
Colville	5	4 - 7	77	99	--
Spokane	4 - 5	5 - 29	81	80	88*
Okanogan	19 - 29	3 - 26	94	95	95*
Methow	5 - 9	5 - 23	97	97	77*
Chelan	7 - 9	2 - 16	103	82	86*
Wenatchee	4 - 9	5 - 21	95	90	98*
Yakima	14 - 16	5 - 46	84	86	87*
Ahtanum	2	19 - 21	98	130	110*
LOWER COLUMBIA					
Mill Creek	3	11 - 12	146	121	143*
Klickitat	1	9	130	149	--
White Salmon	2	20 - 21	90	107	105*
Lewis	6 - 17	3 - 21	107	126	133*
Cowlitz	3 - 8	2 - 22	84	94	97*
PUGET SOUND					
Nisqually	3	9	81	75	92*
White	2 - 3	9 - 22	85	83	83*
Green	1 - 9	4 - 20	90	83	67*
Cedar	5 - 7	7 - 15	98	90	145*
Snoqualmie	1 - 3	6 - 21	91	93	94
Skykomish	1 - 2	7 - 21	85	85	90
Skagit	14	9 - 19	91	90	89*
Baker	1	9	114	76	--
Nooksack	1	9	114	76	--
OLYMPIC PENINSULA					
Skokomish	5	2 - 7	118	91	--
Elwha	1	12	96	80	83*
Dungeness	1	17	115	111	93*

* Records of less than 15 years used in computation of average.

RESERVOIR STORAGE - 1000 Acre Feet

BASIN or STREAM	RESERVOIR	USABLE 1/ CAPACITY	Measured (March 1) 1966	1965	1964	Normal*
		COLUMBIA				
Spokane	Coeur d'Alene Lake	225.1	48.3	175.1	50.2	167.2
Columbia	Franklin D. Roosevelt Lake	5232.0	1730.0	3038.0	2792.0	3449.8
Columbia	Banks Lake 2/	761.8	506.1	447.6	354.4	508.0
Okanogan	Conconully Reservoir	13.0	0	5.0	4.2	7.5
Okanogan	Salmon Lake	10.5	7.7	8.4	9.5	8.9
Chelan	Lake Chelan	676.1	171.9	286.4	221.8	259.6
		YAKIMA				
Yakima	Keechelus Lake	157.8	81.9	106.8	62.8	92.2
Kachess	Kachess Lake	239.0	167.9	189.0	140.2	178.0
Cle Elum	Lake Cle Elum	436.9	194.4	346.2	153.9	260.6
Bumping	Bumping Lake	33.7	3.1	7.7	3.7	11.7
Tieton	Rimrock Lake	198.0	84.5	150.8	95.8	121.9
		PUGET SOUND				
Skagit	Ross Reservoir 2/	1202.9	656.6	885.6	991.6	643.3
Skagit	Diablo Reservoir	90.6	86.4	83.5	83.7	82.8
Skagit	Gorge Reservoir	9.8	8.0	8.3	8.0	--

1/ Based on Active Storage

2/ Less than 15-year record in period 1948-62

* 15-year average 1948-62

SOIL MOISTURE - MARCH

Drainage Basin and Station	Number	Elev.	Profile (Inches) : Depth	Total Capacity :	Soil Moisture Content (Inches) as of March 1 : 1966	1965	1964
CRAB CREEK							
Creston-Kunz	18B1m	2440	48	13.6	7.1	8.2	7.3
Jack Woods	18B3m	2600	48	13.6	7.8	7.3	8.3
Krause	18B4m	2440	48	13.6	7.5	8.6	6.7
Sheffels	18B5m	2360	48	13.6	6.2	6.7	5.2
Wheatridge	18B6m	2200	48	13.6	7.4	7.9	5.6
OKANOGAN							
Trout Creek	3-M	3600	48	7.3	3.3*	4.2	4.4
YAKIMA							
Domery Flat	21B20m	2200	48	6.9	5.2	4.9	--
Lake Cle Elum	21B14M	2200	48	12.8	9.0	9.2	9.2
WALLA WALLA							
Couse	17C3m	3650	48	11.1	7.5	10.6	7.6
Helmers	17C2M	4400	48	12.0	7.9	12.2	8.9
WENATCHEE							
Upper Wheeler	20B7M	4400	48	12.7	8.0	8.4	--

* February 1 measurement

FALL SOIL MOISTURE

Drainage Basin and Station	Number	Elev.	Profile (Inches) : Depth	Total Capacity :	Soil Moisture Content (Inches) as of Oct. 1 : 1965	1964	1963
CRAB CREEK							
Creston-Kunz	18B1m	2440	48	13.6	4.9	5.4	5.1
Jack Woods	18B3m	2600	48	13.6	5.0	4.4	6.3
Krause	18B4m	2440	48	13.6	5.8	5.9	5.2
Sheffels	18B5m	2360	48	13.6	4.0	3.7	3.7
Wheatridge	18B6m	2200	48	13.6	4.2	4.1	4.5
OKANOGAN							
Trout Creek	3-M	3600	48	7.3	4.1	4.9	4.1
YAKIMA							
Domery Flat	21B20m	2200	48	6.9	1.9	4.4	--
Lake Cle Elum	21B14M	2200	48	12.8	6.9	8.5	6.6
WALLA WALLA							
Couse	17C3m	3650	48	11.1	6.0	5.6	5.7
Helmers	17C2M	4400	48	12.0	6.2	6.0	5.8
WENATCHEE							
Upper Wheeler	20B7M	4400	48	12.7	6.2	5.3	--

PRECIPITATION [1]

Division Averages and Departures

DRAINAGE DIVISIONS	FALL Sept-Oct-Nov. 1965 [2] Average	Departure	WINTER Dec. 1965 Jan-Feb. 1966 [2] Average	Departure
Columbia in Canada	6.01	-0.36	9.68	+0.89
Pend Oreille - Spokane	5.44	-3.50	8.94	-3.23
Northeastern Washington	3.31	-2.00	4.97	-2.31
Southeastern Washington	2.84	-3.03	5.71	-2.28
Central Washington	5.55	-6.32	15.27	-3.43
North Central Washington	1.65	-1.38	3.63	-1.06
Northwest Slope Cascades	16.93	-8.11	27.13	-6.32
Southwest Slope Cascades	11.21	-6.88	23.04	-3.09
Blue Mountains, Oregon	2.49	-2.23	4.89	-2.32
Lower Columbia in Oregon	3.23	-1.17	5.97	-2.21

Northeastern Washington - Lower Spokane, Colville, Sanpoil and lower Kettle drainages.

Southeastern Washington - Touchet, Tucannon and Palouse drainages.

Central Washington - Yakima, Wenatchee and Chelan drainages.

North Central Washington - Methow and Okanogan drainages.

Northwest Slope Cascades - Puget Sound drainages.

Southwest Slope Cascades - Lower Columbia drainages.

1/ - Preliminary analysis by U. S. Weather Bureau from data furnished by Meteorological Services of Canada and U. S. Weather Bureau.

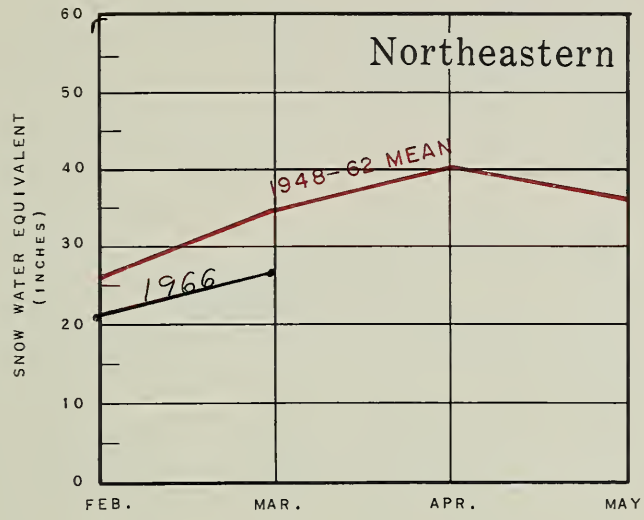
2/ - Departure from 15-year (1948-62) drainage division average.

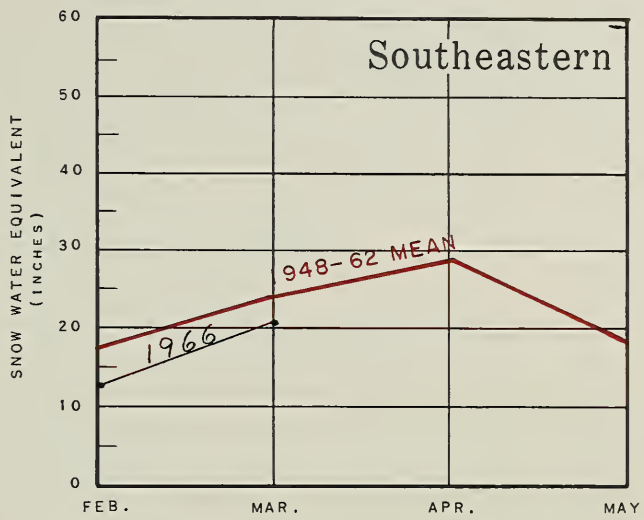
Note - Precipitation shown in inches.

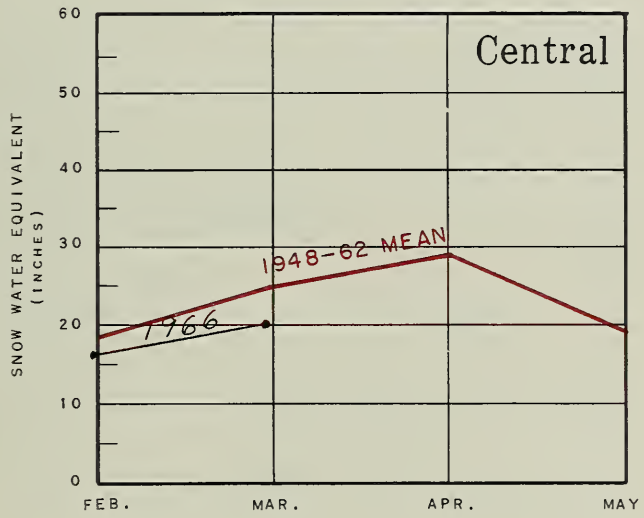
WASHINGTON SNOW COVER

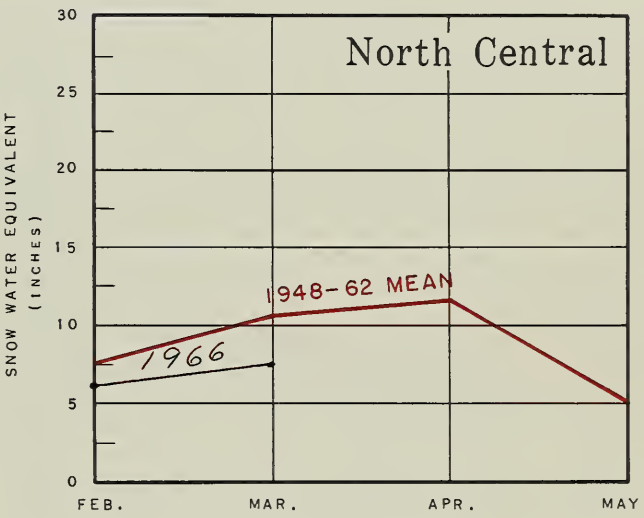
1966

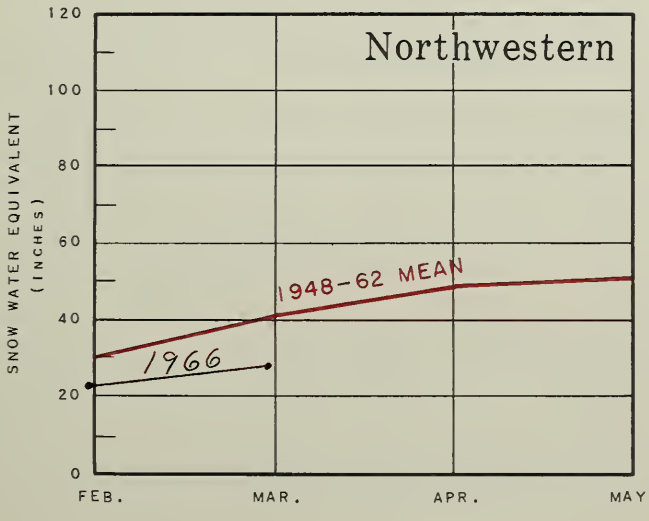
DRAINAGE AREAS

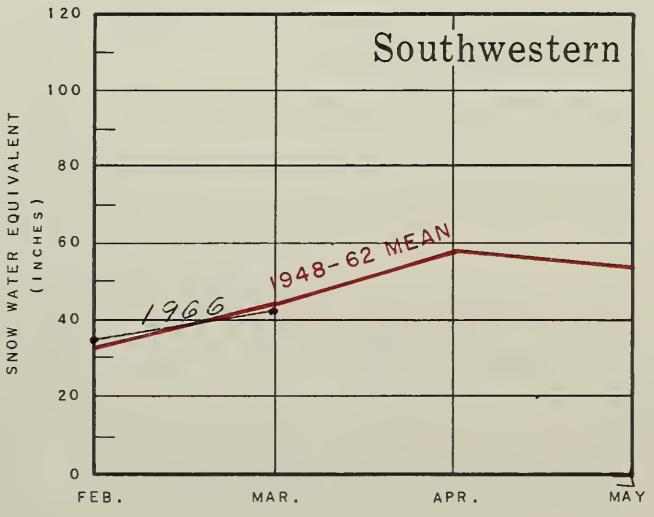










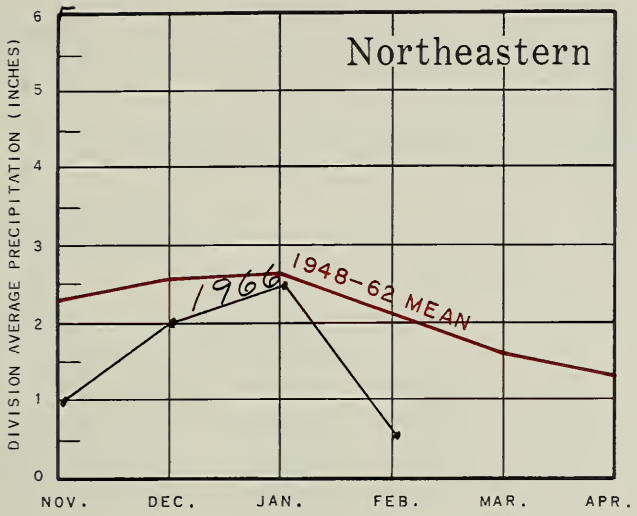


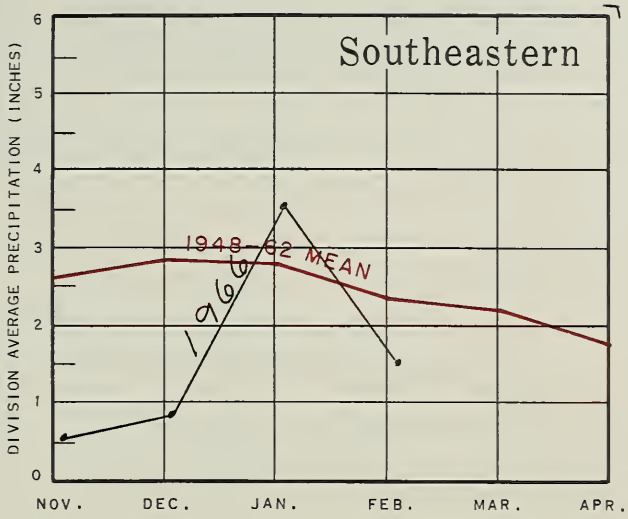
Selected Snow Survey Courses by Soil Conservation Service

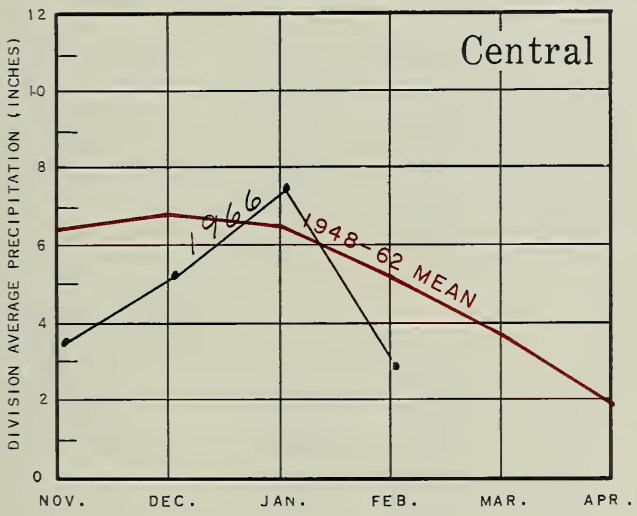
WASHINGTON VALLEY PRECIPITATION

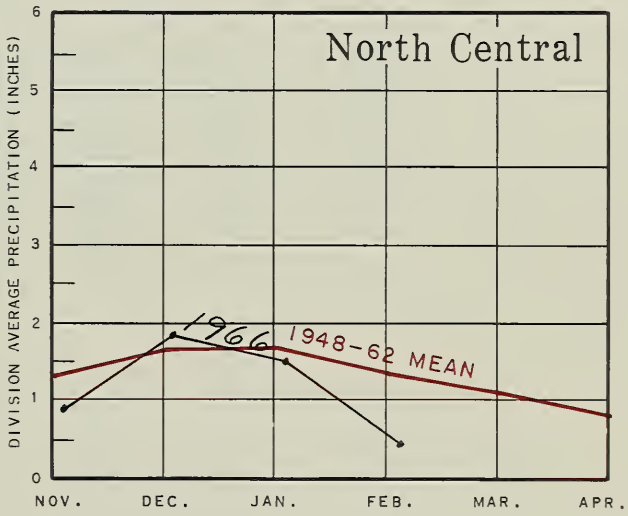
1965 - 1966

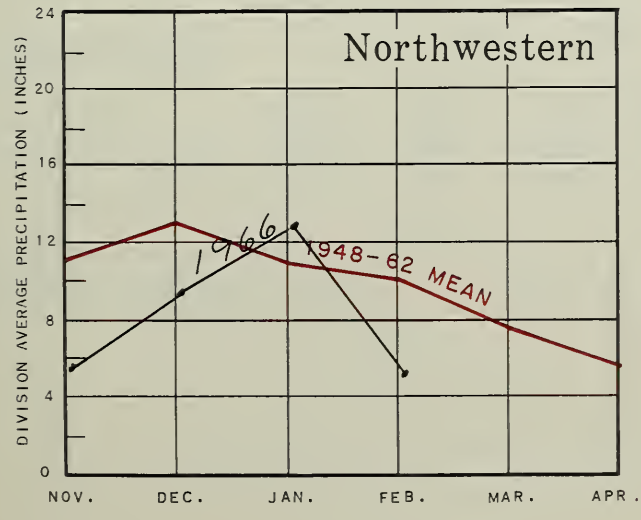
DRAINAGE AREAS

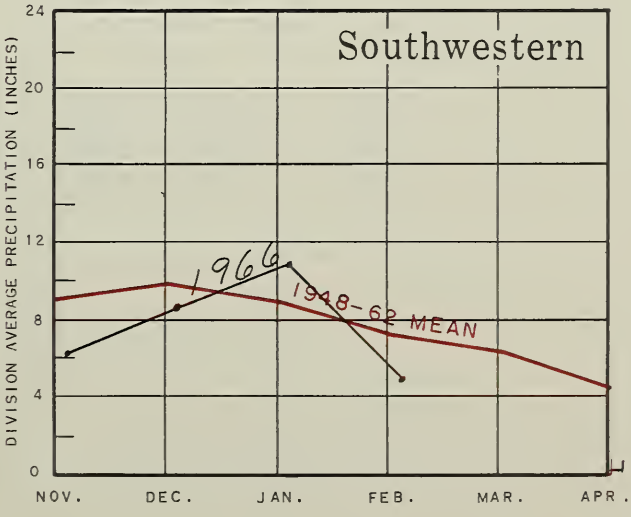












Preliminary Analysis by U. S. Weather Bureau

APPENDIX 2

DRAINAGE DIVISION and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENT 1965 Date of Survey	1965 Snow Depth (In.)	1965 Water Content (In.)	Past Record Water Content (In.) 1965	1964	1948-62 Avg.
Snow Surveys Made on or About February 15, 1966 (Cont.)								
GREEN RIVER								
Stampede Pass	21B10	3000	2/15	116	25.2	43.1	38.0	39.5*
SKYKOMISH RIVER								
#Stevens Pass	21B1	4070	2/14	120	38.2	52.1	55.5	41.4*
BAKER RIVER								
Dock Butte +	21A11A	3800	2/12	160	60.8	63.0	72.8	--
Easy Pass +	21A7A	5200	2/12	179	68.0	72.6	78.0	--
Jasper Pass +	21A6A	5400	2/12	177	67.3	79.0	83.6	--
Mount Blum +	21A18a	5800	2/12	173	65.7	83.2	68.0	--
#Panorama Dome	21A5	4300	2/13	181	69.5	70.9	77.6	--
Rocky Creek +	21A12A	2100	2/12	88	35.2	31.6	33.2	--
Schreibers Meadow +	21A10A	3400	2/12	150	57.0	51.7	66.0	--
S.F. Thunder Cr. +	21A14A	2200	2/12	10	4.0	4.8	5.0	--
Watson Lakes +	21A8A	4500	2/12	150	57.0	63.0	61.6	--
NOOKSACK RIVER								
Panorama Dome	21A5	4300	2/13	181	69.5	70.9	77.6	--

* Adjusted 1948-62 average
\# Not located directly on this drainage
\+ Snow water equivalent estimated from aerial stadia observations

APPENDIX 3

SNOW DATA MARCH 1, 1966

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENT 1966 Date of Survey	Snow Depth (In.)	Water Content (In.)	Past Record Water Content (In.) 1965	1964	1948-62 Avg.
UPPER COLUMBIA DRAINAGE								
PEND OREILLE RIVER								
Baree Creek	15B11	5500	3/1	115	38.1	45.8	31.8	--
Benton Meadow	16A2	2344	3/1	28	7.7	10.1	7.8	6.5
Benton Spring	16A3	4900	2/28	48	15.9	17.3	19.0	20.2
Boyer Mountain	17A2	5250	2/25	61	21.8	28.2	24.8	25.3
Brush Creek	14A4	5000	2/28	40	10.6	13.2	11.8	12.7*
#Chewelah	17A4	4925	2/27	54	18.8	22.8	16.5	--
Hoodo Creek	15C1	6200	3/3	107	34.6	52.3	37.4	45.3*
Lookout	15B2	5250	2/28	88	27.1	33.5	31.7	34.8*
Mosquito Ridge +	16A4A	5100	3/3	108	33.3	44.7	38.1	--
Nelson	Canada	3050	2/28	53	15.2	18.8	15.7	16.2
Schweitzer Bowl	16A6	4500	3/1	84	25.7	29.0	29.2	--
Schweitzer Ridge	16A5	6100	3/1	104	34.8	43.5	41.2	--
Winchester Creek	17A3	2970	2/24	36	11.4	14.4	11.7	13.4*
KETTLE RIVER								
Barnes Creek	Canada	5300	2/28	61	19.5	22.0	16.8	--
Boulder Road	18A2	1450	2/25	17	6.1	--	5.8	--
Butte Creek	18A3	4070	2/25	27	8.0	11.9	7.6	--
Cabin Creek	18A8	3170	2/25	25	6.7	10.4	7.1	--
Carmi	Canada	4100	3/1	20	4.9	9.4	6.4	--
Farron	Canada	4000	2/28	40	12.0	15.5	12.7	13.2
Goat Creek	18A4	3595	2/25	23	6.6	8.7	6.0	--
Monashee Pass	Canada	4500	2/28	45	13.9	15.9	12.8	12.4**
Old Glory Mountain	Canada	7000	3/2	75	22.5	30.1	28.5	23.9**
Snow Caps Creek	18A5	2150	2/25	15	4.2	7.7	5.5	--
Snow Caps Trail	18A6	2720	2/25	19	5.5	8.6	6.2	--
Summit G. S.	18A7	4600	2/25	27	7.2	10.0	7.4	--
COLVILLE RIVER								
Baird	17A6	3215	2/23	26	7.2	10.5	7.6	--
Carlson	18A9	2885	2/23	20	5.2	7.7	6.5	--

\# Not directly on this drainage
* Adjusted 1948-62 average
** Average for years of record
\+ Snow water equivalent estimated from aerial stadia observations

APPENDIX 4

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENT 1966 Date of Survey	1966 Snow Depth (In.)	1966 Water Content (In.)	Past Record Water Content (In.) 1965	1964	1948-62 Avg.
COLVILLE RIVER (Cont.)								
Chewelah	17A4	4925	2/27	54	18.8	22.8	16.5	--
Stranger Mountain	17A5	4990	2/24	43	14.2	18.0	14.9	--
Togo	18A10	3370	2/25	35	11.5	14.9	11.7	--
SPOKANE RIVER								
Copper Ridge	16B2	4800	2/28	75	26.0	34.1	32.1	27.8
Forty-nine Meadows	15B3	5000	3/4	80	26.2	32.3	30.3	32.1*
4th of July Summit	16B3	3100	3/1	40	11.0	9.6	13.1	11.0*
Granite Peak	15B13A	6000	3/4	99	35.4	47.6	34.5	--
Medicine Ridge	15B4A	6150	3/4	106	35.8	50.3	35.1	--
Kellogg Peak +	16B5A	5560	3/3	93	28.6	31.0	30.3	--
#Lookout	15B2	5250	2/28	88	27.1	33.5	31.7	34.8*
Lost Lake	15B14A	6000	3/4	126	43.0	57.2	50.1	--
Lower Sands Creek	16B1	3400	2/28	57	17.4	22.2	22.8	19.1*
#Mosquito Ridge +	16A4A	5110	3/3	108	33.3	44.7	38.1	--
Outlaw Creek	15B12A	3750	3/4	50	15.2	16.4	14.4	--
Roland Summit +	15B5A	5200	3/3	86	26.5	35.9	34.2	--
Sherwin	16C1	3200	2/27	42	13.4	17.2	18.4	--
Sunset +	15B9A	5600	3/3	108	33.3	40.7	37.0	--
OKANOGAN RIVER								
Aberdeen Lake	Canada	4300	2/28	24	7.4	7.2	5.2	5.8**
Blackwall Mountain	Canada	6250	3/1	79	29.7	29.4	37.8	--
Bouleau Creek	Canada	5000	Not Measured			11.6	11.5	9.3**
Brookmere	Canada	3200	2/28	30	7.8	7.6	10.2	9.6
Clark +	19A8a	7000	Late Report			17.1	19.8	--
Copper Mountain	Canada	4300	2/26	20	5.5	--	6.2	6.1**
Enderby	Canada	6250	2/25	90	28.7	19.9	13.7	--
#Freezeout Meadows	20A2	5000	2/24	83	31.0	34.9	28.1	29.7*
Hamilton Hill	Canada	4900	2/27	46	14.2	13.4	13.3	12.2**
#Harts Pass	20A5A	6500	2/25	83	30.9	40.0	40.5	41.6*
#Horseshoe Basin +	19A5a	7000	2/26	42	15.5	11.2	14.7	--
Isintok Lake	Canada	5510	2/28	22	5.7	6.8	--	--
Lost Horse Mountain	Canada	6300	2/28	24	5.1	7.1	8.6	--
#Loup Loup	19A7	4650	2/25	27	7.0	8.7	8.4	--

\+ Snow water equivalent estimated from aerial stadia observations
\# Not located directly on this drainage
* Adjusted 1948-62 average
** Average for years of record

APPENDIX 5

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENT 1966 Date of Survey	Snow Depth (In.)	Water Content (In.)	Past Record Water Content (In.) 1965	1964	1948-62 Avg.
OKANOGAN RIVER (Cont.)								
McCulloch	Canada	4200	2/28	23	6.0	8.1	7.7	6.4
Missezula Mountain	Canada	5100	3/1	31	8.7	7.5	8.1	--
Mission Creek	Canada	6000	2/25	52	14.7	20.5	18.5	15.1**
Monashee Pass	Canada	4500	2/28	45	13.9	15.9	12.8	12.4**
Muckamuck +	19A9a	6390	Late Report			10.8	11.6	--
Mutton Creek No. 1	19A1	5700	2/25	37	11.0	11.3	10.8	13.3*
Mutton Creek No. 2	19A4	6000	2/25	35	11.1	12.2	10.9	13.9*
New Copper Mountain	Canada	4300	2/26	21	5.6	5.5	6.3	5.4**
Nickel Plate Mtn.	Canada	6200	2/28	26	5.3	7.9	11.1	6.5**
Paysayten +	20A28a	4300	2/26	46	17.0	14.9	16.5	--
Postill Lake	Canada	4500	2/28	29	7.8	8.8	7.0	7.2**
Rusty Creek	19A3	4000	3/2	22	6.6	6.5	6.3	7.9
Salmon Meadows	19A2	4500	2/25	28	7.8	9.6	8.5	10.8*
Silver Star Mtn.	Canada	6050	2/28	66	23.5	25.0	25.8	18.8**
Starvation Mtn. +	19A10a	6750	Late Report			14.4	18.2	--
Summerland Reservoir	Canada	4200	2/26	29	8.4	9.1	9.2	--
Touts Coulee	19A6	2845	2/25	13	4.2	4.9	4.2	--
Trout Creek	Canada	4700	3/1	27	6.4	7.9	7.2	7.0
White Rocks Mtn.	Canada	6000	2/28	52	18.1	19.9	20.0	16.3**
METHOW RIVER								
Billy Goat Pass +	20A10a	6400	2/26	81	30.0	28.2	26.4	--
Dollar Watch +	20A29a	7000	2/26	68	25.2	21.7	23.4	--
Harts Pass	20A5A	6500	2/25	83	30.9	40.0	40.5	41.6*
Horseshoe Basin +	19A5a	7000	2/26	42	15.5	11.2	14.7	--
Loup Loup	19A7	4650	2/25	27	7.0	8.7	8.4	--
#Mutton Creek No. 1	19A1	5700	2/25	37	11.0	11.3	10.8	13.3*
#Mutton Creek No. 2	19A4	6000	2/25	35	11.1	12.2	10.9	13.9*
#Rusty Creek	19A3	4000	3/2	22	6.6	6.5	6.3	7.9
#Salmon Meadows	19A2	4500	2/25	28	7.8	9.6	8.5	10.8*
#War Creek Pass +	20A31a	6500	2/26	96	33.6	New Aerial Marker		
CHELAN LAKE BASIN								
Cloudy Pass +	20A22a	6500	2/26	92	32.2	33.2	35.3	38.2*
Greenwood Flat +	20A25a	3540	2/26	42	14.7	17.0	26.3	24.5*
Little Meadows +	20A24a	5275	2/26	88	30.8	35.3	41.0	41.0*

\+ Snow water equivalent estimated from aerial stadia observations
\# Not located directly on this drainage
* Adjusted 1948-62 average
** Average for years of record

APPENDIX 6

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENT 1966 Date of Survey	1966 Snow Depth (In.)	1966 Water Content (In.)	Past Record Water Content (In.) 1965	1964	1948-62 Avg.
CHELAN LAKE BASIN (Cont.)								
Lyman Lake +	20A23A	5900	2/26	183	64.0	43.1	55.8	53.0*
Park Creek Flat +	20A13a	2220	2/26	88	30.8	29.4	36.0	32.0*
Park Creek Ridge +	20A12A	4600	2/26	102	35.7	36.3	49.7	--
Petersons +	20A16a	3730	2/26	72	25.2	33.5	37.8	33.3*
Rainy Pass	20A9	4780	2/25	79	28.0	36.2	36.3	39.4*
Safety Harbor +	20A30A	6300	2/26	86	30.1	20.2	--	--
War Creek Pass +	20A31a	6500	2/26	96	33.6	New Aerial Marker		
ENTIAT RIVER								
Brief	20B19	1600	2/28	27	7.9	8.1	9.6	--
Entiat River Trail +	20A34a	3150	3/1	70	23.1	New Aerial Marker		
Pope Ridge	20B20	4300	2/24	47	15.5	New Course		
Pugh Ridge +	20A32a	6400	3/1	73	24.1	New Aerial Marker		
Snow Brushy +	20A35a	3850	3/1	102	33.6	New Aerial Marker		
Tommy Creek +	20B21a	5300	3/1	73	24.1	New Aerial Marker		
WENATCHEE RIVER								
Berne-Mill Creek	21B23	2925	2/28	78	22.6	25.5	30.2	--
Blewett Pass No. 2	20B2	4270	2/26	45	15.6	17.3	15.1	16.3
Chiwaukum G. S.	20B16	1810	2/28	44	11.5	14.0	12.6	--
#Fish Lake	21B4	3371	2/23	79	27.0	35.8	31.8	35.1*
Lake Wenatchee	20B5	1970	2/28	51	14.3	17.1	16.3	--
Leavenworth R. S.	20B17	1127	2/28	21	6.5	5.0	3.4	--
#Lyman Lake +	20A23A	5900	2/26	183	64.0	43.1	55.8	53.0*
Merritt	20B18	2140	2/28	59	16.1	16.8	20.8	--
Stevens Pass	21B1	4070	2/28	130	41.4	55.9	58.3	45.9
SQUILCHUCK CREEK								
Beehive Springs	20B3	4400	3/1	34	9.6	10.0	9.0	7.0*
Scout-A-Vista	20B4	3400	3/1	30	8.7	9.5	8.2	8.0*

\+ Snow water equivalent estimated from aerial stadia observations
\# Not located directly on this drainage
* Adjusted 1948-62 average
** Average for years of record

APPENDIX 7

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COURSE MEASUREMENT 1966 Date of Survey	1966 Snow Depth (In.)	1966 Water Content (In.)	Past Record Water Content (In.) 1965	1964	1948-62 Avg.
STEMILT CREEK								
Jump-Off	20B8	4450	3/1	34	10.6	9.6	6.4	--
Stemilt Slide	20B6	5000	2/28	47	14.5	14.3	10.8	--
Upper Wheeler	20B7	4400	2/28	37	10.9	10.9	9.7	--
YAKIMA RIVER								
Ahtanum R. S.	21C11	3100	2/24	31	9.2	7.9	5.2	7.3*
Big Boulder Creek	21B9	3200	2/24	54	17.8	25.0	24.9	20.7*
#Blewett Pass No. 2	20B2	4270	2/26	45	15.6	17.3	15.1	16.3
Bumping Lake	21C8	3450	2/25	47	16.1	17.6	17.5	17.4
#Cayuse Pass	21C6	5300	2/28	179	65.9	74.0	84.7	79.0*
Clockum Pass	20B9	5370	Not Measured			15.7	11.1	--
Cooke Creek	20B10	4123	Not Measured			8.1	6.8	--
#Corral Pass	21B13	6000	2/25	84	30.5	--	33.5	39.7*
Fish Lake	21B4	3371	2/23	79	27.0	35.8	31.8	35.1*
Green Lake	21C10	6000	2/24	76	28.8	31.0	24.0	27.3*
Grouse Camp	20B11	5385	3/2	57	18.6	20.9	12.3	--
High Creek	20B12	2930	3/2	28	7.1	6.9	6.1	--
Lake Cle Elum	21B14M	2200	2/27	37	12.6	11.5	13.0	11.0
Manashtash	20C1	3935	3/2	17	5.1	0.0	5.2	--
Morse Lake	21C17	5400	2/28	129	42.8	53.9	49.2	49.3*
Nanum	20B13	3875	3/2	41	13.2	12.4	9.8	--
#Olallie Meadows	21B2	3625	2/25	106	42.0	56.7	56.3	44.6
#Satus Pass	20D1	4030	2/28	49	15.3	11.8	10.3	--
#Stampede Pass	21B10	3000	3/1	127	29.0	44.6	41.6	43.4*
Trail Creek	20B14	3360	3/2	17	5.7	0.0	4.2	--
Tunnel Avenue	21B8	2450	2/26	56	21.6	25.8	31.4	25.1
Walters Flat	20B15	3360	3/2	33	9.4	8.7	7.4	--
White Pass (E Side)	21C28	4500	3/1	76	21.5	26.0	25.1	21.5*
White Pass (Leech L)	21C27	4500	3/1	94	29.9	32.0	32.0	--
AHTANUM CREEK								
Ahtanum R. S.	21C11	3100	2/24	31	9.2	7.9	5.2	7.3*
Green Lake	21C10	6000	2/24	76	28.8	31.0	24.0	27.3*

\# Not directly on this drainage
* Adjusted 1948-62 average

APPENDIX 8

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENT 1966 Date of Survey	1966 Snow Depth (In.)	1966 Water Content (In.)	Past Record Water Content (In.) 1965	1964	1948-62 Avg.
LOWER COLUMBIA DRAINAGE								
ASOTIN CREEK								
Spruce Springs	17C4	5700	2/23	62	20.3	32.9	--	--
MILL CREEK								
Homestead	17C1	4030	2/28	42	13.4	9.6	9.7	9.1*
Martin Springs	17C2	4400	2/28	54	16.8	15.9	15.5	14.2*
Walla Walla Div.	18D13	2400	2/24	18	7.0	0.0	5.5	2.8*
KLICKITAT RIVER								
Satus Pass	20D1	4030	2/28	49	15.3	11.8	10.3	--
West Fork Cabin	21C15	3000	Late Report			15.9	7.3	--
WHITE SALMON RIVER								
Cultus Creek	21C12	4000	3/1	139	46.5	48.2	40.5	42.8*
#Surprise Lakes	21C13A	4250	3/1	150	45.7	54.0	45.9	44.8*
WIND RIVER								
Oldman Pass	21D19	3100	2/26	77	33.6	29.6	17.2	13.7*
LEWIS RIVER								
Blue Lake +	21C22a	4800	3/2	182	67.4	74.3	71.1	--
Bob's Trail	21C21	2200	2/28	64	25.0	22.3	14.8	--
Calamity Ridge +	22D1a	2500	3/2	47	16.4	4.4	4.4	--
Council Pass +	21C18a	4200	3/2	130	43.0	43.9	44.9	34.2*
#Cultus Creek	21C12	4000	3/1	139	46.5	48.2	40.5	42.8
Divide Meadow +	21C29a	5600	3/2	130	45.5	54.3	50.1	--
Grand Meadow	21C25	3500	2/28	86	30.4	33.6	24.2	--
Lone Pine Shelter	21C26	3800	2/24	109	44.7	41.8	34.8	--
Marble Mountain +	22C5a	3200	3/2	131	45.9	32.6	29.0	--
#Mosquito Meadows	21C19	4100	2/24	112	45.8	47.2	38.3	36.2*
New Muddy River	22C3	1400	2/24	45	20.1	15.2	9.8	--

\+ Snow water equivalent estimated from aerial stadia observations
\# Not located directly on this drainage
* Adjusted 1948-62 average

APPENDIX 9

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENT 1966 Date of Survey	1966 Snow Depth (In.)	1966 Water Content (In.)	Past Record Water Content (In.) 1965	1964	1948-62 Avg.
LEWIS RIVER (Cont.)								
Oldman Pass	21D19	3100	2/26	77	33.6	29.6	17.2	13.7*
Plains of Abraham +	22C1a	4400	Not Measured					
Smith Creek Road	22C4	2100	2/24	64	29.4	28.6	10.6	--
Spencer Meadow +	21C20a	3400	3/2	112	41.4	23.8	23.5	20.2*
Surprise Lakes	21C13A	4250	3/1	150	45.7	54.0	45.9	44.8*
Table Mountain +	21C24a	4200	3/2	135	44.5	48.0	48.0	--
Timbered Peak +	21D18a	3000	3/2	86	36.9	18.0	20.2	--
COWLITZ RIVER								
Cayuse Pass	21C6	5300	2/28	179	65.9	74.0	84.7	79.0*
Mosquito Meadows	21C19	4100	2/24	112	45.8	47.2	38.3	36.2*
Ohanapecosh	21C32	2200	3/1	70	22.0	23.6	12.0	--
Packwood Lake	21C31	2870	2/25	40	17.8	18.3	11.1	--
Pigtail Peak	21C33	5900	3/1	147	49.4	78.6	67.5	--
Plains of Abraham +	22C1a	4400	Not Measured					
Potato Hill	21C14	4500	Late Report			33.8	29.6	26.1*
#White Pass (E Side)	21C28	4500	3/1	76	21.5	26.0	25.1	21.5*
#White Pass (Leech L)	21C27	4500	3/1	94	29.9	32.0	32.0	--
Willame Creek	21C30	3250	2/23	78	31.3	35.9	29.9	--
PUGET SOUND DRAINAGE								
NISQUALLY RIVER								
Ghost Forest	21C4	4550	2/25	103	39.7	43.8	52.2	40.2*
Longmire	21C3	2760	2/25	32	12.8	16.5	15.5	8.1*
New Paradise Park	21C35	5500	2/25	130	50.6	New Course		
Stem Glade	21C1	5050	2/25	134	50.6	67.1	70.6	63.8*
WHITE RIVER								
#Cayuse Pass	21C6	5300	2/28	179	65.9	74.0	84.7	79.0*
Corral Pass	21C13	6000	2/25	84	30.5	--	33.5	39.7*
#Morse Lake	21C17	5400	2/28	129	42.8	53.9	49.2	49.3*
White River Camp Gr	21C34	4000	3/1	74	26.7	New Course		

\+ Snow water equivalent estimated from aerial stadia observations
\# Not located directly on this drainage
* Adjusted 1948-62 average

APPENDIX 10

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENT 1966 Date of Survey	1966 Snow Depth (In.)	1966 Water Content (In.)	Past Record Water Content (In.) 1965	1964	1948-62 Avg.
GREEN RIVER								
Airstrip	21B24	1800	3/1	27	7.0	7.0	10.0	--
Charley Creek	21B25	1200	2/28	4	1.3	0.0	0.0	--
Grass Mtn. No. 1	21B26	4000	3/1	84	30.2	25.2	30.7	--
Grass Mtn. No. 2	21B27	2900	3/1	86	29.2	22.8	28.2	--
Grass Mtn. No. 3	21B28	2100	3/1	30	7.7	1.5	9.5	--
Lester Creek	21B29	3100	3/1	85	24.8	25.8	26.7	--
Sawmill Ridge	21B31	4700	3/1	103	32.2	45.8	41.6	--
Stampede Pass	21B10	3000	3/1	127	29.0	44.6	41.6	43.4*
Twin Camp	21B30	4100	3/1	72	21.9	30.8	32.8	--
CEDAR RIVER								
City Cabin	21B3	2390	2/25	53	20.6	26.3	26.0	16.9*
Mt. Gardner	21B21	3300	3/2	76	24.2	24.3	27.3	--
Mt. Lindsay	21B16	2500	3/3	75	22.8	23.8	20.5	13.2*
Mt. Washington	21B15	3000	3/1	56	19.4	7.6	16.4	7.1*
Rex River	21B17	2400	3/1	71	21.4	--	24.7	14.3*
S. F. Cedar	21B6	3000	2/25	58	24.4	27.6	28.5	23.5*
Tinkham Creek	21B20	3400	2/25	70	26.1	30.1	33.6	--
SNOQUALMIE RIVER								
#Lake Elizabeth	21B19	2900	3/1	141	47.1	47.7	46.1	--
Olallie Meadows	21B2	3625	2/25	106	42.0	56.7	56.3	44.6
S. F. Tolt	21B18	1900	3/1	22	6.1	0.0	0.0	--
SKYKOMISH RIVER								
Lake Elizabeth	21B19	2900	3/1	141	47.1	47.7	46.1	--
#Stevens Pass	21B1	4070	2/28	130	41.4	55.9	58.3	45.9
SKAGIT RIVER								
Beaver Creek Trail	21A4	2200	2/24	41	16.2	17.3	16.9	16.0*
Beaver Pass	21A1	3680	2/24	75	27.7	27.6	35.7	32.7*
#Cloudy Pass +	20A22a	6500	2/26	92	32.2	33.2	35.3	38.2*

\# Not directly on this drainage
* Adjusted 1948-62 average
\+ Snow water equivalent estimated from aerial stadia observations

APPENDIX 11

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENT 1966 Date of Survey	1966 Snow Depth (In.)	1966 Water Content (In.)	Past Record Water Content (In.) 1965	1964	1948-62 Avg.
SKAGIT RIVER (Cont.)								
Devils Park	20A4	5900	2/25	82	31.4	39.8	42.9	41.3*
Freezeout Cr. Trail	20A1	3500	2/24	34	10.9	14.1	13.1	13.7*
Freezeout Meadows	20A2	5000	2/24	83	31.0	34.9	28.1	29.7*
#Harts Pass	20A5A	6500	2/25	83	30.9	40.0	40.5	41.6*
Klesilkwa	Canada	3700	3/1	43	12.1	13.2	11.2	12.5*
Lake Hozomeen	21A2	2600	2/24	31	10.8	10.4	9.6	11.0*
#Lyman Lake +	20A23A	5900	2/26	183	64.0	43.1	55.8	53.0*
Meadow Cabins	20A8	1900	2/25	17	6.7	15.1	7.9	8.0*
New Tashme	Canada	2500	2/28	41	13.1	15.8	13.0	11.3
#Rainy Pass	20A9	4780	2/25	79	28.0	36.2	36.3	39.4*
Thunder Basin	20A7	4200	2/25	50	16.8	22.8	24.3	22.9*
BAKER RIVER								
Dock Butte +	21A11A	3800	3/2	184	71.8	64.8	68.9	--
Easy Pass +	21A7A	5200	3/2	194	75.7	79.8	97.3	--
Jasper Pass +	21A6A	5400	3/2	204	79.6	82.0	91.6	--
Marten Lake +	21A9A	3600	3/2	200	78.0	80.8	77.8	--
Mount Blum +	21A18a	5800	3/2	203	79.2	83.2	--	--
Panorama	21A5	4300	2/26	180	69.4	61.0	91.8	--
Rocky Creek +	21A12A	2100	3/2	96	38.4	35.0	25.8	--
Schreibers Meadow +	21A10A	3400	3/2	163	63.6	58.4	63.5	--
S.F. Thunder Creek +	21A14A	2200	3/2	18	7.2	9.9	8.3	--
Watson Lakes +	21A8A	4500	3/2	174	67.9	64.0	64.0	--
NOOKSACK RIVER								
Panorama	21A5	4300	2/26	180	69.4	61.0	91.8	--
OLYMPIC PENINSULA								
DUNGENESS RIVER								
Deer Park	23B4	5200	2/24	64	22.7	19.7	20.5	24.5*

\+ Snow water equivalent estimated from aerial stadia observation
* Adjusted 1948-62 average
\# Not located directly on this drainage

APPENDIX 12

SNOW DATA MARCH 1, 1966

DRAINAGE BASIN and SNOW COURSE	No.	Elev.	SNOW COVER MEASUREMENT 1966 Date of Survey	Snow Depth (In.)	Water Content (In.)	Past Record Water Content (In.) 1965	1964	1948-62 Avg.
MORSE CREEK								
Deer Park G. S.	23B13	4850	2/23	47	16.6	15.6	--	--
Morse Creek	23B12	5425	2/25	109	41.3	38.7	38.1	--
ELWHA RIVER								
Hurricane	23B3	4500	2/25	64	20.9	21.8	26.1	25.1*
SKOKOMISH RIVER								
Black & White	23B7	4200	2/24	103	41.1	33.2	47.2	--
Black & White Lakes	23B6	4700	2/24	140	57.8	44.9	56.9	--
Four Stream	23B10	3000	2/24	72	30.4	25.7	25.6	--
Home Sweet Home	23B5	5200	2/24	157	64.8	55.7	82.0	--
Sundown Pass	23B8	3900	2/24	139	57.9	53.9	64.4	--

* Adjusted 1948-62 averages

Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Department of Lands, Forests and Water Resources,
Water Resources Service, British Columbia

States:

Washington State Department of Conservation
Washington State Department of Natural Resources

Federal:

Department of the Army
    Corps of Engineers
U. S. Department of Agriculture
    Forest Service
U. S. Department of Commerce
    Weather Bureau
U. S. Department of the Interior
    Bonneville Power Administration
    Bureau of Reclamation
    Geological Survey
    National Park Service

PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company

OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenatchee Heights Irrigation District

MUNICIPALITIES

City of Walla Walla
City of Tacoma
City of Seattle

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

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